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August 30, 2019

VIA ELECTRONIC FILING

The Honorable Jocelyn G. Boyd
Chief Clerk/Administrator
Public Service Commission of South Carolina
101 Executive Center Drive, Suite 100
Columbia, South Carolina 29210

Re: **Duke Energy Progress, LLC – Monthly Power Plant Performance Report**
Docket No. 2006-224-E

Dear Ms. Boyd:

Pursuant to the Commission's Orders in Docket No. 1977-354-E, enclosed for filing is the Monthly Power Plant Performance Report in Docket No. 2006-224-E for the month of July 2019.

Should you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely,

Rebecca J. Dulin

Enclosure

cc: Ms. Dawn Hipp, Office of Regulatory Staff
Mr. Jeffrey M. Nelson, Office of Regulatory Staff
Ms. Nanette Edwards, Office of Regulatory Staff
Mr. Michael Seaman-Huynh, Office of Regulatory Staff
Ms. Heather Shirley Smith, Duke Energy
Mr. Scott Elliott, Elliott & Elliott, P.A.
Mr. Garrett Stone, Brickfield, Burchette, Ritts & Stone, PC
Mr. Gary Walsh, Walsh Consulting, LLC

Duke Energy Progress
Base Load Power Plant Performance Review Plan

Period: July, 2019

Station	Unit	Date of Outage	Duration of Outage	Scheduled / Unscheduled	Cause of Outage	Reason Outage Occurred	Remedial Action Taken
Brunswick	1	None					
	2	None					
Harris	1	None					
Robinson	2	None					

Duke Energy Progress
Base Load Power Plant
Performance Review Plan
July 2019

Lee Energy Complex

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
1B	7/11/2019 9:31:00 PM To 7/12/2019 11:36:00 AM	Unsch	5447	Gas Fuel System	Lightning strike caused Fuel Gas System Upset	
1B	7/12/2019 11:36:00 AM To 7/12/2019 11:44:00 AM	Unsch	5530	Jet Engine - Starting System (including Motor)	CT tripped during startup due to SFC	
1B	7/12/2019 11:44:00 AM To 7/12/2019 3:58:00 PM	Unsch	5530	Jet Engine - Starting System (including Motor)	CT started using 01C SFC after failed start on normal SFC	
1C	7/11/2019 9:31:00 PM To 7/12/2019 10:15:00 AM	Unsch	5447	Gas Fuel System	Fuel gas system upset caused autounload and trip	
1C	7/12/2019 10:15:00 AM To 7/12/2019 10:31:00 AM	Unsch	3416	Other Feedwater Pump Problems	Loss of HRSG BFP due to NPSH indications failed	
1C	7/12/2019 10:31:00 AM To 7/12/2019 1:07:00 PM	Unsch	3416	Other Feedwater Pump Problems	HRSG BFP unavailable due to NPSH indication	
ST1	7/11/2019 9:31:00 PM To 7/12/2019 2:28:00 PM	Unsch	5447	Gas Fuel System	Lost Steam due to loss of 2 CTs because of fuel gas system upset	

Mayo Station

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
1	7/29/2019 7:00:00 AM To 8/2/2019 10:00:00 PM	Sch	8812	Scr Catalyst	Unit outage to lance and vacuum SCR catalyst on both boilers	

Richmond County Station

No Outages at Baseload Units During the Month.

Roxboro Station

No Outages at Baseload Units During the Month.

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

Duke Energy Progress
Base Load Power Plant
Performance Review Plan
July 2019

Sutton Energy Complex

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
1A	7/26/2019 6:03:00 AM To 7/26/2019 10:44:00 AM	Unsch	6200	Combined Cycle Instruments And Controls	Main Feeder Breaker to CT Electrical Package tripped	
1A	7/26/2019 5:06:00 PM To 7/26/2019 9:00:00 PM	Sch	5079	Other Gas Turbine Combustor Problems	Combustor drain damaged	

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

Duke Energy Progress
Base Load Power Plant Performance Review Plan

July 2019
Brunswick Nuclear Station

	Unit 1		Unit 2	
(A) MDC (mW)	938		932	
(B) Period Hours	744		744	
(C) Net Gen (mWh) and Capacity Factor (%)	703,797	100.85	693,788	100.05
(D) Net mWh Not Gen due to Full Schedule Outages	0	0.00	0	0.00
* (E) Net mWh Not Gen due to Partial Scheduled Outages	0	0.00	0	0.00
(F) Net mWh Not Gen due to Full Forced Outages	0	0.00	0	0.00
* (G) Net mWh Not Gen due to Partial Forced Outages	-5,925	-0.85	-380	-0.05
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00	0	0.00
* (I) Core Conservation	0	0.00	0	0.00
(J) Net mWh Possible in Period	697,872	100.00%	693,408	100.00%
(K) Equivalent Availability (%)		99.98		100.00
(L) Output Factor (%)		100.85		100.05
(M) Heat Rate (BTU/NkWh)		10,536		10,687

*** Estimate**
FOOTNOTE: D and F Include Ramping Losses

Duke Energy Progress
Base Load Power Plant Performance Review Plan

July 2019
Harris Nuclear Station

	Unit 1	
(A) MDC (mW)	964	
(B) Period Hours	744	
(C) Net Gen (mWh) and Capacity Factor (%)	708,692	98.81
(D) Net mWh Not Gen due to Full Schedule Outages	0	0.00
* (E) Net mWh Not Gen due to Partial Scheduled Outages	0	0.00
(F) Net mWh Not Gen due to Full Forced Outages	0	0.00
* (G) Net mWh Not Gen due to Partial Forced Outages	8,524	1.19
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	717,216	100.00%
(K) Equivalent Availability (%)		100.00
(L) Output Factor (%)		98.81
(M) Heat Rate (BTU/NkWh)		10,553

*** Estimate**
FOOTNOTE: D and F Include Ramping Losses

Duke Energy Progress
Base Load Power Plant Performance Review Plan

July 2019
Robinson Nuclear Station

	Unit 2	
(A) MDC (mW)	741	
(B) Period Hours	744	
(C) Net Gen (mWh) and Capacity Factor (%)	567,974	103.02
(D) Net mWh Not Gen due to Full Schedule Outages	0	0.00
* (E) Net mWh Not Gen due to Partial Scheduled Outages	0	0.00
(F) Net mWh Not Gen due to Full Forced Outages	0	0.00
* (G) Net mWh Not Gen due to Partial Forced Outages	-16,670	-3.02
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	551,304	100.00%
(K) Equivalent Availability (%)		100.00
(L) Output Factor (%)		103.02
(M) Heat Rate (BTU/NkWh)		10,443

*** Estimate**
FOOTNOTE: D and F Include Ramping Losses

Duke Energy Progress
Base Load Power Plant
Performance Review Plan
July 2019

Lee Energy Complex

	Unit 1A	Unit 1B	Unit 1C	Unit ST1	Block Total
(A) MDC (mW)	225	227	228	379	1,059
(B) Period Hrs	744	744	744	744	744
(C) Net Generation (mWh)	121,420	118,701	119,767	260,945	620,833
(D) Capacity Factor (%)	72.53	70.28	70.60	92.54	78.80
(E) Net mWh Not Generated due to Full Scheduled Outages	0	0	0	0	0
(F) Scheduled Outages: percent of Period Hrs	0.00	0.00	0.00	0.00	0.00
(G) Net mWh Not Generated due to Partial Scheduled Outages	40,920	41,356	42,247	727	125,251
(H) Scheduled Derates: percent of Period Hrs	24.44	24.49	24.91	0.26	15.90
(I) Net mWh Not Generated due to Full Forced Outages	0	4,188	3,557	6,424	14,169
(J) Forced Outages: percent of Period Hrs	0.00	2.48	2.10	2.28	1.80
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	5,060	4,643	4,061	13,880	27,643
(N) Economic Dispatch: percent of Period Hrs	3.02	2.75	2.39	4.92	3.51
(O) Net mWh Possible in Period	167,400	168,888	169,632	281,976	787,896
(P) Equivalent Availability (%)	75.56	73.03	73.00	97.46	82.30
(Q) Output Factor (%)	72.53	72.07	72.12	94.70	80.24
(R) Heat Rate (BTU/NkWh)	8,933	9,165	9,149	5,074	7,397

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

Duke Energy Progress
Base Load Power Plant
Performance Review Plan
July 2019

Richmond County Station

	Unit 7	Unit 8	Unit ST4	Block Total
(A) MDC (mW)	194	194	182	570
(B) Period Hrs	744	744	744	744
(C) Net Generation (mWh)	110,231	110,993	127,500	348,724
(D) Capacity Factor (%)	76.37	76.90	94.16	82.23
(E) Net mWh Not Generated due to Full Scheduled Outages	0	0	0	0
(F) Scheduled Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(G) Net mWh Not Generated due to Partial Scheduled Outages	29,760	30,504	9,672	69,936
(H) Scheduled Derates: percent of Period Hrs	20.62	21.13	7.14	16.49
(I) Net mWh Not Generated due to Full Forced Outages	0	0	0	0
(J) Forced Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	4,345	2,839	0	7,184
(N) Economic Dispatch: percent of Period Hrs	3.01	1.97	0.00	1.69
(O) Net mWh Possible in Period	144,336	144,336	135,408	424,080
(P) Equivalent Availability (%)	79.38	78.87	92.86	83.51
(Q) Output Factor (%)	76.37	76.90	94.16	82.23
(R) Heat Rate (BTU/NkWh)	11,930	11,204	0	7,337

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

Duke Energy Progress
Base Load Power Plant
Performance Review Plan
July 2019

Richmond County Station

	Unit 9	Unit 10	Unit ST5	Block Total
(A) MDC (mW)	216	216	248	680
(B) Period Hrs	744	744	744	744
(C) Net Generation (mWh)	125,705	125,142	186,604	437,451
(D) Capacity Factor (%)	78.22	77.87	101.13	86.47
(E) Net mWh Not Generated due to Full Scheduled Outages	0	0	0	0
(F) Scheduled Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(G) Net mWh Not Generated due to Partial Scheduled Outages	31,248	30,504	0	61,752
(H) Scheduled Derates: percent of Period Hrs	19.44	18.98	0.00	12.21
(I) Net mWh Not Generated due to Full Forced Outages	0	0	0	0
(J) Forced Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	3,751	5,058	0	8,809
(N) Economic Dispatch: percent of Period Hrs	2.33	3.15	0.00	1.74
(O) Net mWh Possible in Period	160,704	160,704	184,512	505,920
(P) Equivalent Availability (%)	80.56	81.02	100.00	87.79
(Q) Output Factor (%)	78.22	77.87	101.13	86.47
(R) Heat Rate (BTU/NkWh)	11,786	11,745	0	6,747

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

Duke Energy Progress
Base Load Power Plant
Performance Review Plan
July 2019

Sutton Energy Complex

	Unit 1A	Unit 1B	Unit ST1	Block Total
(A) MDC (mW)	224	224	271	719
(B) Period Hrs	744	744	744	744
(C) Net Generation (mWh)	124,194	126,265	168,808	419,267
(D) Capacity Factor (%)	74.52	75.76	83.72	78.38
(E) Net mWh Not Generated due to Full Scheduled Outages	874	0	0	874
(F) Scheduled Outages: percent of Period Hrs	0.52	0.00	0.00	0.16
(G) Net mWh Not Generated due to Partial Scheduled Outages	39,713	39,432	4,345	83,490
(H) Scheduled Derates: percent of Period Hrs	23.83	23.66	2.16	15.61
(I) Net mWh Not Generated due to Full Forced Outages	1,049	0	0	1,049
(J) Forced Outages: percent of Period Hrs	0.63	0.00	0.00	0.20
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	712	712
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.35	0.13
(M) Net mWh Not Generated due to Economic Dispatch	827	959	27,759	29,545
(N) Economic Dispatch: percent of Period Hrs	0.50	0.58	13.77	5.52
(O) Net mWh Possible in Period	166,656	166,656	201,624	534,936
(P) Equivalent Availability (%)	75.02	76.34	97.49	83.90
(Q) Output Factor (%)	75.39	75.76	83.72	78.66
(R) Heat Rate (BTU/NkWh)	11,992	11,993	0	7,164

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

Duke Energy Progress
Intermediate Power Plant Performance
Review Plan
July 2019

	Mayo Station Unit 1
(A) MDC (mW)	746
(B) Period Hrs	744
(C) Net Generation (mWh)	179,702
(D) Net mWh Possible in Period	555,024
(E) Equivalent Availability (%)	77.07
(F) Output Factor (%)	45.60
(G) Capacity Factor (%)	32.38

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

Duke Energy Progress
Intermediate Power Plant Performance
Review Plan
July 2019

	Roxboro Station		
	Unit 2	**Unit 3**	**Unit 4**
(A) MDC (mW)	673	698	711
(B) Period Hrs	744	744	744
(C) Net Generation (mWh)	334,860	285,740	334,387
(D) Net mWh Possible in Period	500,712	519,312	528,984
(E) Equivalent Availability (%)	99.26	97.52	90.34
(F) Output Factor (%)	68.22	55.02	63.21
(G) Capacity Factor (%)	66.88	55.02	63.21

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

Duke Energy Progress
Base Load Power Plant Performance Review Plan

August 2018 - July 2019
Brunswick Nuclear Station

	Unit 1		Unit 2	
(A) MDC (mW)	938		932	
(B) Period Hours	8760		8760	
(C) Net Gen (mWh) and Capacity Factor (%)	7,619,736	92.73	6,757,389	82.77
(D) Net mWh Not Gen due to Full Schedule Outages	0	0.00	716,056	8.77
* (E) Net mWh Not Gen due to Partial Scheduled Outages	34,837	0.42	98,055	1.20
(F) Net mWh Not Gen due to Full Forced Outages	626,240	7.62	366,339	4.49
* (G) Net mWh Not Gen due to Partial Forced Outages	-63,933	-0.77	226,481	2.77
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00	0	0.00
* (I) Core Conservation	0	0.00	0	0.00
(J) Net mWh Possible in Period	8,216,880	100.00%	8,164,320	100.00%
(K) Equivalent Availability (%)		93.72		85.73
(L) Output Factor (%)		100.38		95.42
(M) Heat Rate (BTU/NkWh)		10,428		10,765

*** Estimate**
FOOTNOTE: D and F Include Ramping Losses

Duke Energy Progress
Base Load Power Plant Performance Review Plan

August 2018 - July 2019
Harris Nuclear Station

	Unit 1	
(A) MDC (mW)	964	
(B) Period Hours	8760	
(C) Net Gen (mWh) and Capacity Factor (%)	8,599,175	103.27
(D) Net mWh Not Gen due to Full Schedule Outages	0	0.00
* (E) Net mWh Not Gen due to Partial Scheduled Outages	732	0.01
(F) Net mWh Not Gen due to Full Forced Outages	0	0.00
* (G) Net mWh Not Gen due to Partial Forced Outages	-272,803	-3.28
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	8,327,104	100.00%
(K) Equivalent Availability (%)		99.99
(L) Output Factor (%)		103.26
(M) Heat Rate (BTU/NkWh)		10,237

*** Estimate**
FOOTNOTE: D and F Include Ramping Losses

Duke Energy Progress
Base Load Power Plant Performance Review Plan

August 2018 - July 2019
Robinson Nuclear Station

	Unit 2	
(A) MDC (mW)	741	
(B) Period Hours	8760	
(C) Net Gen (mWh) and Capacity Factor (%)	5,466,817	84.22
(D) Net mWh Not Gen due to Full Schedule Outages	1,167,520	17.99
* (E) Net mWh Not Gen due to Partial Scheduled Outages	87,300	1.34
(F) Net mWh Not Gen due to Full Forced Outages	0	0.00
* (G) Net mWh Not Gen due to Partial Forced Outages	-230,477	-3.55
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	6,491,160	100.00%
(K) Equivalent Availability (%)		80.80
(L) Output Factor (%)		102.69
(M) Heat Rate (BTU/NkWh)		10,337

*** Estimate**
FOOTNOTE: D and F Include Ramping Losses

Duke Energy Progress
Base Load Power Plant
Performance Review Plan
August, 2018 through July, 2019

Lee Energy Complex

	Unit 1A	Unit 1B	Unit 1C	Unit ST1	Block Total
(A) MDC (mW)	225	227	228	379	1,059
(B) Period Hrs	8,760	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,405,748	1,397,876	1,418,366	2,819,976	7,041,966
(D) Capacity Factor (%)	71.32	70.30	71.01	84.94	75.91
(E) Net mWh Not Generated due to Full Scheduled Outages	111,997	126,753	133,053	201,382	573,185
(F) Scheduled Outages: percent of Period Hrs	5.68	6.37	6.66	6.07	6.18
(G) Net mWh Not Generated due to Partial Scheduled Outages	254,999	262,903	266,903	37,625	822,430
(H) Scheduled Derates: percent of Period Hrs	12.94	13.22	13.36	1.13	8.87
(I) Net mWh Not Generated due to Full Forced Outages	37,249	40,516	39,653	67,923	185,341
(J) Forced Outages: percent of Period Hrs	1.89	2.04	1.99	2.05	2.00
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	3,860	3,860
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.12	0.04
(M) Net mWh Not Generated due to Economic Dispatch	161,007	160,472	139,305	189,275	650,059
(N) Economic Dispatch: percent of Period Hrs	8.17	8.07	6.97	5.70	7.01
(O) Net mWh Possible in Period	1,971,000	1,988,520	1,997,280	3,320,040	9,276,840
(P) Equivalent Availability (%)	79.49	78.37	77.99	90.64	82.92
(Q) Output Factor (%)	78.58	76.96	77.84	92.58	83.11
(R) Heat Rate (BTU/NkWh)	8,988	9,093	9,011	4,599	7,256

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

Duke Energy Progress
Base Load Power Plant
Performance Review Plan
August, 2018 through July, 2019

Richmond County Station

	Unit 7	Unit 8	Unit ST4	Block Total
(A) MDC (mW)	192	192	179	563
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,241,415	1,237,404	1,396,812	3,875,631
(D) Capacity Factor (%)	73.85	73.61	89.05	78.60
(E) Net mWh Not Generated due to Full Scheduled Outages	103,816	93,362	60,727	257,904
(F) Scheduled Outages: percent of Period Hrs	6.18	5.55	3.87	5.23
(G) Net mWh Not Generated due to Partial Scheduled Outages	187,931	192,400	77,379	457,709
(H) Scheduled Derates: percent of Period Hrs	11.18	11.45	4.93	9.28
(I) Net mWh Not Generated due to Full Forced Outages	15,578	22,448	5,014	43,040
(J) Forced Outages: percent of Period Hrs	0.93	1.34	0.32	0.87
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	12,850	12,850
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.82	0.26
(M) Net mWh Not Generated due to Economic Dispatch	132,336	135,461	15,826	283,624
(N) Economic Dispatch: percent of Period Hrs	7.87	8.06	1.01	5.75
(O) Net mWh Possible in Period	1,681,075	1,681,075	1,568,609	4,930,759
(P) Equivalent Availability (%)	81.75	81.69	90.11	84.35
(Q) Output Factor (%)	79.88	79.87	93.37	84.27
(R) Heat Rate (BTU/NkWh)	11,388	11,187	0	7,219

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

Duke Energy Progress
Base Load Power Plant
Performance Review Plan
August, 2018 through July, 2019

Richmond County Station

	Unit 9	Unit 10	Unit ST5	Block Total
(A) MDC (mW)	216	216	248	680
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,251,290	1,255,172	1,637,089	4,143,551
(D) Capacity Factor (%)	66.13	66.34	75.36	69.56
(E) Net mWh Not Generated due to Full Scheduled Outages	325,051	342,004	423,113	1,090,168
(F) Scheduled Outages: percent of Period Hrs	17.18	18.07	19.48	18.30
(G) Net mWh Not Generated due to Partial Scheduled Outages	175,607	168,381	0	343,988
(H) Scheduled Derates: percent of Period Hrs	9.28	8.90	0.00	5.77
(I) Net mWh Not Generated due to Full Forced Outages	0	1,001	4,286	5,287
(J) Forced Outages: percent of Period Hrs	0.00	0.05	0.20	0.09
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	1,144	1,144
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.05	0.02
(M) Net mWh Not Generated due to Economic Dispatch	140,212	125,602	106,848	372,662
(N) Economic Dispatch: percent of Period Hrs	7.41	6.64	4.92	6.26
(O) Net mWh Possible in Period	1,892,160	1,892,160	2,172,480	5,956,800
(P) Equivalent Availability (%)	73.54	72.97	80.27	75.82
(Q) Output Factor (%)	82.74	83.10	94.92	87.28
(R) Heat Rate (BTU/NkWh)	11,349	11,259	0	6,838

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

Duke Energy Progress
Base Load Power Plant
Performance Review Plan
August, 2018 through July, 2019

Sutton Energy Complex

	Unit 1A	Unit 1B	Unit ST1	Block Total
(A) MDC (mW)	224	224	271	719
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,220,105	1,194,422	1,326,470	3,740,997
(D) Capacity Factor (%)	62.18	60.87	55.88	59.40
(E) Net mWh Not Generated due to Full Scheduled Outages	110,193	153,485	101,458	365,136
(F) Scheduled Outages: percent of Period Hrs	5.62	7.82	4.27	5.80
(G) Net mWh Not Generated due to Partial Scheduled Outages	241,274	224,630	20,013	485,917
(H) Scheduled Derates: percent of Period Hrs	12.30	11.45	0.84	7.71
(I) Net mWh Not Generated due to Full Forced Outages	135,688	182,687	569,475	887,850
(J) Forced Outages: percent of Period Hrs	6.91	9.31	23.99	14.10
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	13,685	13,685
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.58	0.22
(M) Net mWh Not Generated due to Economic Dispatch	254,980	207,016	342,859	804,855
(N) Economic Dispatch: percent of Period Hrs	12.99	10.55	14.44	12.78
(O) Net mWh Possible in Period	1,962,240	1,962,240	2,373,960	6,298,440
(P) Equivalent Availability (%)	75.17	71.42	70.32	72.17
(Q) Output Factor (%)	77.49	77.86	78.17	77.85
(R) Heat Rate (BTU/NkWh)	11,395	11,394	0	7,354

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

Duke Energy Progress
Intermediate Power Plant
Performance Review Plan
August, 2018 through July, 2019

Mayo Station

Units	Unit 1
(A) MDC (mW)	746
(B) Period Hrs	8,760
(C) Net Generation (mWh)	1,248,604
(D) Net mWh Possible in Period	6,534,960
(E) Equivalent Availability (%)	66.79
(F) Output Factor (%)	41.01
(G) Capacity Factor (%)	19.11

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

Duke Energy Progress
Intermediate Power Plant
Performance Review Plan
August, 2018 through July, 2019

Roxboro Station

Units	Unit 2	Unit 3	Unit 4
(A) MDC (mW)	673	698	711
(B) Period Hrs	8,760	8,760	8,760
(C) Net Generation (mWh)	1,385,457	1,544,685	2,273,347
(D) Net mWh Possible in Period	5,895,480	6,114,480	6,228,360
(E) Equivalent Availability (%)	77.88	59.41	72.63
(F) Output Factor (%)	54.67	56.80	60.04
(G) Capacity Factor (%)	23.50	25.26	36.50

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

Duke Energy Progress
Outages for 100 mW or Larger Units
July, 2019

Unit Name	Capacity Rating (mW)	Full Outage Hours		
		Scheduled	Unscheduled	Total
Brunswick 1	**938**	**0.00**	**0.00**	**0.00**
Brunswick 2	**932**	**0.00**	**0.00**	**0.00**
Harris 1	**964**	**0.00**	**0.00**	**0.00**
Robinson 2	**741**	**0.00**	**0.00**	**0.00**

Duke Energy Progress
Outages for 100 mW or Larger Units
July 2019

Unit Name	Capacity Rating (mW)	Full Outage Hours		Total Outage Hours
		Scheduled	Unscheduled	
Asheville Steam 1	192	0.00	0.00	0.00
Asheville Steam 2	192	0.00	0.00	0.00
Asheville CT 3	185	0.00	0.00	0.00
Asheville CT 4	185	0.00	0.00	0.00
Darlington CT 12	133	0.00	0.00	0.00
Darlington CT 13	133	0.00	0.00	0.00
Lee Energy Complex CC 1A	225	0.00	0.00	0.00
Lee Energy Complex CC 1B	227	0.00	18.45	18.45
Lee Energy Complex CC 1C	228	0.00	15.60	15.60
Lee Energy Complex CC ST1	379	0.00	16.95	16.95
Mayo Steam 1	746	65.00	0.00	65.00
Richmond County CT 1	189	0.00	0.00	0.00
Richmond County CT 2	187	0.00	0.00	0.00
Richmond County CT 3	185	0.00	0.00	0.00
Richmond County CT 4	186	0.00	0.00	0.00
Richmond County CT 6	187	0.00	0.00	0.00
Richmond County CC 7	194	0.00	0.00	0.00
Richmond County CC 8	194	0.00	0.00	0.00
Richmond County CC ST4	182	0.00	0.00	0.00
Richmond County CC 9	216	0.00	0.00	0.00
Richmond County CC 10	216	0.00	0.00	0.00
Richmond County CC ST5	248	0.00	0.00	0.00

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

Duke Energy Progress
Outages for 100 mW or Larger Units
July 2019

Unit Name	Capacity Rating (mW)	Full Outage Hours		Total Outage Hours
		Scheduled	Unscheduled	
Roxboro Steam 1	380	0.00	2.10	2.10
Roxboro Steam 2	673	0.00	0.00	0.00
Roxboro Steam 3	698	0.00	0.00	0.00
Roxboro Steam 4	711	0.00	0.00	0.00
Sutton Energy Complex CC 1A	224	3.90	4.68	8.58
Sutton Energy Complex CC 1B	224	0.00	0.00	0.00
Sutton Energy Complex CC ST1	271	0.00	0.00	0.00
Wayne County CT 10	192	0.00	0.00	0.00
Wayne County CT 11	192	0.00	0.00	0.00
Wayne County CT 12	193	0.00	0.00	0.00
Wayne County CT 13	191	0.00	0.00	0.00
Wayne County CT 14	195	0.00	0.00	0.00

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.